

Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 14:40:14 ON 09 AUG 2005

=> FIL STNGUIDE

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'STNGUIDE' ENTERED AT 14:40:20 ON 09 AUG 2005

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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Aug 5, 2005 (20050805/UP).

=> file pnttext

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.06

0.27

FILE 'EPFULL' ENTERED AT 14:40:29 ON 09 AUG 2005

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FILE 'RDISCLOSURE' ENTERED AT 14:40:29 ON 09 AUG 2005

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FILE 'USPATFULL' ENTERED AT 14:40:29 ON 09 AUG 2005

CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 14:40:29 ON 09 AUG 2005

CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

=> s free lactic acid# and dissolved lactate salt#

5 FILES SEARCHED...

L1 16 FREE LACTIC ACID# AND DISSOLVED LACTATE SALT#

=> s l1 and filter?

5 FILES SEARCHED...

L2 11 L1 AND FILTER?

=> s l2 and extract? and phase#

5 FILES SEARCHED...

L3 11 L2 AND EXTRACT? AND PHASE#

=> s l3 and recycle?

5 FILES SEARCHED...

L4 11 L3 AND RECYCLE?

=> s l4 and fermentation broth#

L5 11 L4 AND FERMENTATION BROTH#

=> s l5 and lactide#

L6 11 L5 AND LACTIDE#

=> s l6 and catalyst#

L7 8 L6 AND CATALYST#

=> s 17 and adsorbent#

L8 8 L7 AND ADSORBENT#

=> s 18 and basic anion exchange resin#

L9 0 L8 AND BASIC ANION EXCHANGE RESIN#

=> s 18 and elut?

L10 8 L8 AND ELUT?

=> s 110 and evaporat?

L11 8 L10 AND EVAPORAT?

=> d 111 1-8

L11 ANSWER 1 OF 8 EPFULL COPYRIGHT 2005 EPO/FIZ KA on STN

AN 1998:82116 EPFULL

DUPD 19990630 DUPW 199926

TIEN LACTIC ACID PROCESSING; METHODS; ARRANGEMENTS; AND, PRODUCTS.

TIFR TRAITEMENT DE L'ACIDE LACTIQUE; PROCEDES, AGENCEMENTS ET PRODUITS ASSOCIES.

TIDE MILCHSAEURE BEARBEITUNG: VERFAHREN, ANORDNUNG, UND PRODUKTEN..

IN EYAL, Aharon, M., Kibbutz Ramat Rachel, Jerusalem, IL;

STARR, John, N., 2350 Manvela Drive, Chaska, MN 55318, US;

FISHER, Rod, 16822 S. Shore Lane, Eden Prairie, MN 55346, US;

HAZAN, Betty, Iceland 17/22, Jerusalem, IL;

CANARI, Riki, Beit Zeit 34, Beit Zeit, IL;

WITZKE, David, R., 2420 McMullin Drive, Oskaloosa, IA 52577, US;

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PAN 2046665

LAF English

LA English

LAP English

TL German; English; French

DT Patent

PIT WOA2 International application published without search report

PI WO 9919290 A2 19990422

DS AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

AI EP 1998-953421 A 19981013

WO 1998-US21538 A 19981013

PRAI US 1997-950289 A 19971014

IC.VER 6

ICM C07C059-08

ICS C12P007-56

AN 1998:82116 EPFULL

DUPD 20011004 DUPW 200140

TIEN LACTIC ACID PROCESSING; METHODS; ARRANGEMENTS; AND, PRODUCTS.

TIFR TRAITEMENT DE L'ACIDE LACTIQUE; PROCEDES, AGENCEMENTS ET PRODUITS ASSOCIES.

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KOLSTAD, Jeffrey, J., 16122 Ringer Road, Wayzata, MN 55391, US

PA Cargill, Incorporated, 15407 McGinty Road, P.O. Box 5624, Minneapolis, MN 55391-2399, US

PAN 2046665

AG Portal, Gerard, et al, Cabinet Beau de Lomenie 158, rue de l'Universite,  
 75340 Paris Cedex 07, FR  
 AGN 48943  
 LAF English  
 LA English  
 LAP English  
 TL German; English; French  
 DT Patent  
 PIT EPA2 Application published without search report  
 PI EP 1023258 A2 20000802  
 EP 1023258 A3 19990826  
 WO 9919290 19990422  
 DS AT BE CH DE ES FI FR GB IT LI NL SE  
 AI EP 1998-953421 A 19981013  
 WO 1998-US21538 A 19981013  
 PRAI US 1997-950289 A 19971014  
 IC.VER 7  
 ICM C07C059-08  
 ICS C12P007-56

AN 1998:82116 EPFULL  
 DUPD 20040526 DUPW 200422  
 TIEN LACTIC ACID PROCESSING; METHODS; ARRANGEMENTS; AND, PRODUCTS.  
 TIFR TRAITEMENT DE L'ACIDE LACTIQUE; PROCEDES, AGENCEMENTS ET PRODUITS  
 ASSOCIES.  
 TIDE MILCHSAEURE BEARBEITUNG: VERFAHREN, ANORDNUNG, UND PRODUKTEN.  
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 FISHER, Rod, 16822 S. Shore Lane, Eden Prairie, MN 55346, US;  
 HAZAN, Betty, Iceland 17/22, Jerusalem, IL;  
 CANARI, Riki, Beit Zeit 34, Beit Zeit, IL;  
 WITZKE, David, R., 2420 McMullin Drive, Oskaloosa, IA 52577, US;  
 GRUBER, Patrick, Richard, 10951 Flanders Court N.E., Blaine, MN 55449,  
 US;  
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 PA Cargill, Incorporated, 15407 McGinty Road, P.O. Box 5624, Minneapolis,  
 MN 55391-2399, US  
 PAN 2046665  
 AG Portal, Gerard, et al, Cabinet Beau de Lomenie 158, rue de l'Universite,  
 75340 Paris Cedex 07, FR  
 AGN 48943  
 LAF English  
 LA English  
 LAP English  
 TL German; English; French  
 DT Patent  
 PIT EPB1 Granted patent  
 PI EP 1023258 B1 20030604  
 WO 9919290 19990422  
 DS AT BE CH DE ES FI FR GB IT LI NL SE  
 AI EP 1998-953421 A 19981013  
 WO 1998-US21538 A 19981013  
 PRAI US 1997-950289 A 19971014  
 REN SAN-MARTIN M ET AL: "LIQUID-LIQUID EXTRACTION OF LACTIC ACID WITH  
 ALAMINE 336" JOURNAL OF CHEMICAL TECHNOLOGY AND BIOTECHNOLOGY  
 (INTERNATIONAL JOURNAL OF BIOTECHNICAL AND CHEMICAL PROCESSES), vol. 65,  
 no. 3, 1 March 1996, pages 281-285, XP000581231  
 REP EP 614983 A  
 WO 9306226 A  
 WO 9503268 A  
 WO 9525081 A  
 WO 9532301 A  
 WO 9815517 A  
 WO 9815519 A  
 WO 9919503 A  
 IC.VER 7  
 ICM C07C059-08  
 ICS C12P007-56

L11 ANSWER 2 OF 8 PCTFULL COPYRIGHT 2005 Univentio on STN  
AN 1999019290 PCTFULL ED 20020515  
TIEN LACTIC ACID PROCESSING; METHODS; ARRANGEMENTS; AND, PRODUCTS  
TIFR TRAITEMENT DE L'ACIDE LACTIQUE; PROCEDES, AGENCEMENTS ET PRODUITS  
ASSOCIES  
IN EYAL, Aharon, M.;  
STARR, John, N.;  
FISHER, Rod;  
HAZAN, Betty;  
CANARI, Riki;  
WITZKE, David, R.;  
GRUBER, Patrick, Richard;  
KOLSTAD, Jeffrey, J.  
PA CARGILL, INCORPORATED;  
EYAL, Aharon, M.;  
STARR, John, N.;  
FISHER, Rod;  
HAZAN, Betty;  
CANARI, Riki;  
WITZKE, David, R.;  
GRUBER, Patrick, Richard;  
KOLSTAD, Jeffrey, J.  
LA English  
DT Patent  
PI WO 9919290 A2 19990422  
DS W:

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES  
FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG  
SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW  
SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK  
ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA  
GN GW ML MR NE SN TD TG

AI WO 1998-US21538 A 19981013  
PRAI US 1997-08/950,289 19971014  
ICM C07C059-08  
ICS C12P007-56

L11 ANSWER 3 OF 8 USPATFULL on STN  
AN 2004:268545 USPATFULL  
TI Lactic acid processing; methods; arrangements; and, products  
IN Eyal, Aharon M., Jerusalem, ISRAEL  
Starr, John N., Chaska, MN, UNITED STATES  
Fisher, Rod, Eden Prairie, MN, UNITED STATES  
Hazan, Betty, Jerusalem, ISRAEL  
Canari, Riki, Beit Zeit, ISRAEL  
Witzke, David R., Oskaloosa, IA, UNITED STATES  
Gruber, Patrick R., Blaine, MN, UNITED STATES  
Kolstad, Jeffrey J., Wayzata, MN, UNITED STATES  
PA Cargill, Incorporated, Minneapolis, MN (non-U.S. corporation)  
PI US 2004210088 A1 20041021  
AI US 2004-788696 A1 20040226 (10)  
RLI Continuation of Ser. No. US 2003-390958, filed on 18 Mar 2003, ABANDONED  
Continuation of Ser. No. US 2001-927116, filed on 10 Aug 2001, GRANTED,  
Pat. No. US 6534679 Continuation of Ser. No. US 1998-132720, filed on 12  
Aug 1998, GRANTED, Pat. No. US 6320077 Continuation of Ser. No. US  
1997-950289, filed on 14 Oct 1997, GRANTED, Pat. No. US 6229046  
DT Utility  
FS APPLICATION  
LN.CNT 2627  
INCL INCLM: 562/589.000  
INCLS: 528/271.000  
NCL NCLM: 562/589.000  
NCLS: 528/271.000  
IC [7]  
ICM: C07C059-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 4 OF 8 USPATFULL on STN  
AN 2003:251947 USPATFULL

TI Lactic acid processing; methods; arrangements; and, products  
IN Eyal, Aharon M., Jerusalem, ISRAEL  
Starr, John N., Chaska, MN, UNITED STATES  
Fisher, Rod, Eden Prairie, MN, UNITED STATES  
Hazan, Betty, Jerusalem, ISRAEL  
Canari, Riki, Beit Zeit, ISRAEL  
Witzke, David R., Oskaloosa, IA, UNITED STATES  
Gruber, Patrick R., Blaine, MN, UNITED STATES  
Kolstad, Jeffrey J., Wayzata, MN, UNITED STATES  
PA Cargill, Incorporated, Minneapolis, MN (non-U.S. corporation)  
PI US 2003176736 A1 20030918  
AI US 2003-390958 A1 20030318 (10)  
RLI Continuation of Ser. No. US 2001-927116, filed on 10 Aug 2001, GRANTED,  
Pat. No. US 6534679 Continuation of Ser. No. US 1998-132720, filed on 12  
Aug 1998, GRANTED, Pat. No. US 6320077 Continuation of Ser. No. US  
1997-950289, filed on 14 Oct 1997, GRANTED, Pat. No. US 6229046  
DT Utility  
FS APPLICATION  
LN.CNT 2608  
INCL INCLM: 562/580.000  
INCLS: 562/589.000  
NCL NCLM: 562/580.000  
NCLS: 562/589.000  
IC [7]  
ICM: C07C051-42  
ICS: C07C059-08  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 5 OF 8 USPATFULL on STN  
AN 2002:8611 USPATFULL  
TI Lactic acid processing; methods; arrangements; and, products  
IN Eyal, Aharon M., Jerusalem, ISRAEL  
Starr, John N., Chaska, MN, UNITED STATES  
Fisher, Rod, Eden Prairie, MN, UNITED STATES  
Hazan, Betty, Jerusalem, ISRAEL  
Canari, Riki, Beit Zeit, ISRAEL  
Witzke, David R., Oskaloosa, IA, UNITED STATES  
Gruber, Patrick R., Blaine, MN, UNITED STATES  
Kolstad, Jeffrey J., Wayzata, MN, UNITED STATES  
PA Cargill, Incorporated, Minneapolis, MN, UNITED STATES (non-U.S.  
corporation)  
PI US 2002004611 A1 20020110  
US 6534679 B2 20030318  
AI US 2001-927116 A1 20010810 (9)  
RLI Continuation of Ser. No. US 1998-132720, filed on 12 Aug 1998, PENDING  
Continuation of Ser. No. US 1997-950289, filed on 14 Oct 1997, GRANTED,  
Pat. No. US 6229046  
DT Utility  
FS APPLICATION  
LN.CNT 2612  
INCL INCLM: 562/589.000  
NCL NCLM: 562/589.000  
NCL NCLM: 562/589.000  
NCLS: 435/139.000; 562/580.000; 562/593.000  
IC [7]  
ICM: C07C059-08  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 6 OF 8 USPATFULL on STN  
AN 2001:209033 USPATFULL  
TI Lactic acid processing; methods; arrangements; and, product  
IN Eyal, Aharon M., Jerusalem, Israel  
Starr, John N., Chaska, MN, United States  
Fisher, Rod, Eden Prairie, MN, United States  
Hazan, Betty, Jerusalem, Israel  
Canari, Riki, Beit Zeit, Israel  
Witzke, David R., Oskaloosa, IA, United States  
Gruber, Patrick R., Blaine, MN, United States  
Kolstad, Jeffrey J., Wayzata, MN, United States

PA Cargill, Incorporated, Minneapolis, MN, United States (U.S. corporation)  
PI US 6320077 B1 20011120  
AI US 1998-132720 19980812 (9)  
RLI Continuation of Ser. No. US 1997-950289, filed on 14 Oct 1997 And Ser.  
No. US 1999-284160, filed on 25 Oct 1999  
DT Utility  
FS GRANTED  
LN.CNT 2705  
INCL INCLM: 562/589.000  
INCLS: 562/580.000; 562/593.000; 435/139.000  
NCL NCLM: 562/589.000  
NCLS: 435/139.000; 562/580.000; 562/593.000  
IC [7]  
ICM: C07C059-08  
ICS: C07C051-42; C12P007-56  
EXF 562/589; 562/580; 562/593; 435/139  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 7 OF 8 USPATFULL on STN  
AN 2001:67857 USPATFULL  
TI Lactic acid processing methods arrangements and products  
IN Eyal, Aharon M., Jerusalem, Israel  
Starr, John N., Chaska, MN, United States  
Fisher, Rod, Eden Prairie, MN, United States  
Hazan, Betty, Jerusalem, Israel  
Canari, Riki, Beit Zeit, Israel  
Witzke, David R., Oskaloosa, IA, United States  
Gruber, Patrick R., Blaine, MN, United States  
Kolstad, Jeffrey J., Wayzata, MN, United States  
PA Cargill, Incorporated, Minneapolis, MN, United States (U.S. corporation)  
PI US 6229046 B1 20010508  
AI US 1997-950289 19971014 (8)  
DT Utility  
FS Granted  
LN.CNT 2681  
INCL INCLM: 562/589.000  
INCLS: 562/580.000; 562/593.000; 435/139.000  
NCL NCLM: 562/589.000  
NCLS: 435/139.000; 562/580.000; 562/593.000  
IC [7]  
ICM: C07C059-08  
ICS: C07C051-42; C12P007-56  
EXF 562/589; 562/580; 562/593; 435/139  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 8 OF 8 USPAT2 on STN  
AN 2002:8611 USPAT2  
TI Lactic acid processing; methods; arrangements; and, products  
IN Eyal, Aharon M., Jerusalem, ISRAEL  
Starr, John N., Chaska, MN, United States  
Fisher, Rod, Eden Prairie, MN, United States  
Hazan, Betty, Jerusalem, ISRAEL  
Canari, Riki, Beit Zeit, ISRAEL  
Witzke, David R., Oskaloosa, IA, United States  
Gruber, Patrick R., Blaine, MN, United States  
Kolstad, Jeffrey J., Wayzata, MN, United States  
PA Cargill, Incorporated, Minneapolis, MN, United States (U.S. corporation)  
PI US 6534679 B2 20030318  
AI US 2001-927116 20010810 (9)  
RLI Continuation of Ser. No. US 1998-132720, filed on 12 Aug 1998, now  
patented, Pat. No. US 6320077 Continuation of Ser. No. US 1997-950289,  
filed on 14 Oct 1997, now patented, Pat. No. US 6229046  
DT Utility  
FS GRANTED  
LN.CNT 2668  
INCL INCLM: 562/589.000  
INCLS: 562/580.000; 562/593.000; 435/139.000  
NCL NCLM: 562/589.000  
NCL NCLM: 562/589.000

NCLS: 435/139.000; 562/580.000; 562/593.000  
IC [7]  
ICM: C07C059-08  
ICS: C07C051-42; C12P007-56  
EXF 562/589; 562/580; 562/593; 435/139  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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